Remote control systems for HEATSTRIP™

This installation and user manual encompasses information about the following products:

MHS-FBM
MHS-FBHS
MHS-FBWS
MHS-ESM

D

reddot design award
winner 2010

Designpreis Deutschland 2011
NOMINIERT

Exclusively engineered and made in Germany

1 Table of contents

1.0 Use	page 2
2.0 Safety Information	page 2
3.0 Functionality description	page 4
4.0 Assembly	page 5
5.0 Programming	page 7
6.0 Operation	page 9
7.0 Connecting element MHS-ESM	page 10
8.0 Technical Information	back page

Delivery:	
Radio receiver module	1 piece
Power connector (already installed on the machine)	2 pieces
Assembly and user manual	1 piece
and optionally	
Hand held remote control	1 piece
or	
Wall-mounted remote control	1 piece

Thank you for choosing HEATSTRIP™, the black light infrared electric heater. This user manual will guide you through the connection and programming of the radio receiver MHS-FBM. These instructions are an addition and valid only in combination with the general HEATSTRIP™ manual, chapter 4.7.

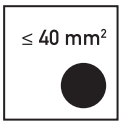
Our remote controls are powered by the EnOcean technology, which enables them to run battery free. When pressing the button of the remote control, the system harnesses the physical pressure of your thumb onto the remote control and converts it into an electro-magnetic signal that is picked up by our MHS-FBM receiver.

Electronic smog and radio signals
Many people are worried about the possible consequences for their health of the electronic smog created by the countless electrical fields due to the many wireless devices we are surrounded by. Manufacturers hence worry about possible claims for damages based on such health related harm. Nevertheless, the need for wireless devices keeps increasing quickly. Therefore, we had the standard intensity of the electro-magnetic fields created by our radio receivers measured by ECOLOG under in situ usage conditions (ECOLOG is the German Institute for Socio-Ecological Research and Education).

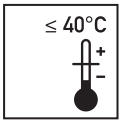
What are the results?
1. The Enocean Radio system emits one hundred times less intensive high-frequency fields than conventional light switches (the latter's high-frequency fields are produced through the characteristic sparkling switching process).
2. The intensity of the quick high-frequency emissions of the EnOcean radio switch are up to 10,000 times fewer than the permanent high-frequency emissions of the mobile phone network stations in residential homes.
3. Thanks to the lack of cables and switches, our radio system works without interefering with low-frequency electro-magnetic emissions.
4. This radio system is used in schools, hospitals, and even in houses built according to Feng Shui principles.

3 2.0 Safety information

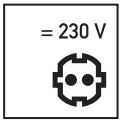
When planning where to locate your device, please check accessibility to the different components as you may have to access them in the future. Electronic components may also fail and have to be replaced. Only to be installed by a professional.



Please check the cable cross -section between the heater and the power supply is sufficient in terms of size and power.



The surrounding temperature should not exceed 40 degrees Celsius.

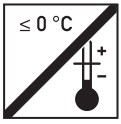


Exclusively for 230V / 50 Hz AC .

Keep the devise away from physical chocs and do not use force.

Protect from wetness and moisture.

Do not install in the proximity of open fire.



Do not install where surrounding temperatures are constantly below 0 degrees Celsius.

The radio transmitter operates with a closed signal in the 866Mhz region. You can program a maximum of 28 radio transmitters (i.e. remote controls) per single MHS-FBM receiver. The 32BIT encryption provides protection from any signal confusion from other devices such as mobile phones or garage remote controls.

The blue LED signals that the remote control is ready to use.

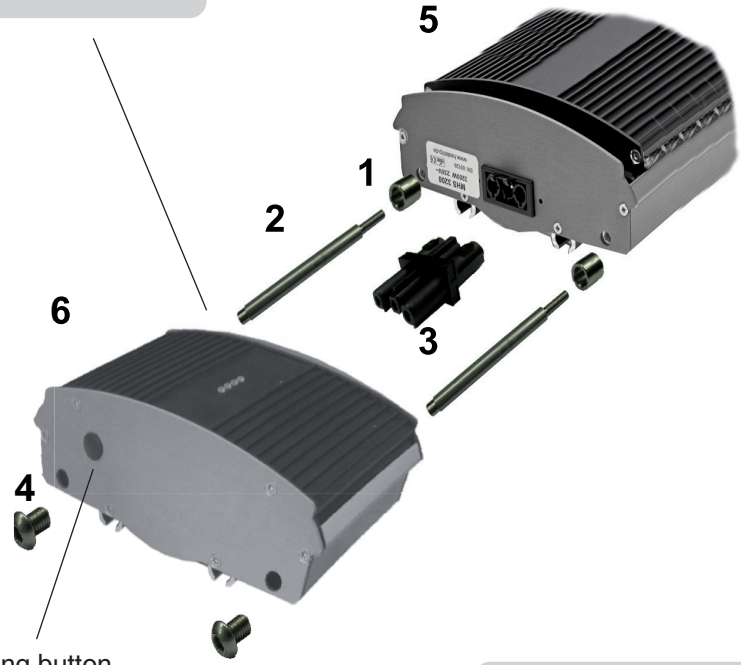
The number of green LEDs lit indicates the chosen heat intensity.

You can select your requested heat settings by pressing the buttons on the remote control.

remote control MHS-FBHS

remote control MHS-FBWS

Caution: antenna is not removable.



Programming button

Legend:

1x MHS Heatstrip (5)
1x MHS-FBM (6)
2x Sockets (1)
2x Bolts (2)
1x Power connector (3)
2x Screws (4)

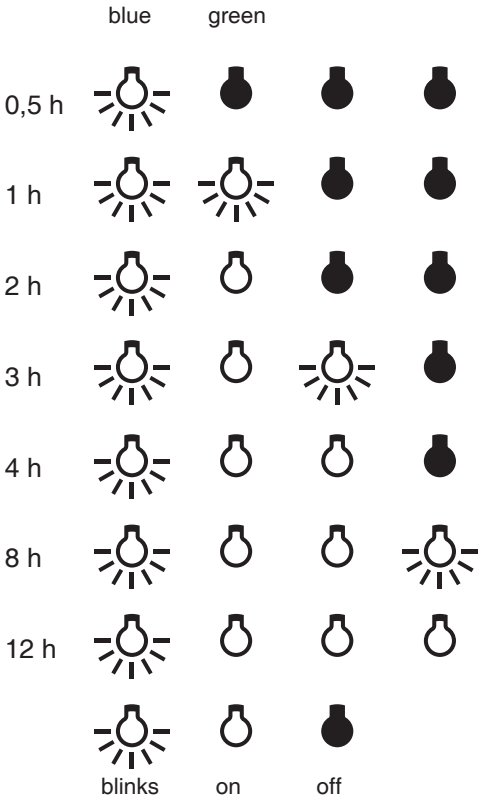
Remove the lateral screw cap in order to reach the programming button. Once the programming is complete, please put the screw cap back in place.

Caution: When synching the Heatstrip Heater with the MHS-FBM receiver, please make sure to place the remote control in a perimeter less than 5 meters away from the Heatstrip Receiver. When the programming mode is on, make sure to maintain the power supply to the receiver as a potential power cut can damage the device.

Fix the sockets (1) on the bolts (2). Screw the bolts into the Heatstrip heater (5). Plug the connector (3) to the heater and push the two elements together until you feel a click. Fix the MHS-FBM receiver or the connecting element MHS-ESM (6) until it clicks with the connector. Place the screws (4) in and turn tight to secure the fixing.

Light Scheme

LED Display



Remote control programming

- Press briefly the lateral button on the MHS-FBM receiver (less than 1 sec).
  Three green LEDs + one blue LED flash two times per second.
- On the remote control, press and release the button you wish to control the device with.
  Then the LEDs blink for 2 seconds while the radio button is being synchronized with the MHS-FBM receiver
  To terminate the programming mode, wait for 30 seconds or press the programming button.
  The chosen switch is saved.

Remote control resetting

- Press briefly and release the lateral programming button on the MHS-FBM receiver (less than 1 sec). Three green LEDs + one blue LED flash two times per second.
- On the remote control, press and release button to reset.
  The LEDs flash 10 times, then the button is reset.
- To terminate the reset mode, wait for 30 seconds or press the programming button.

Setting of maximum heating duration

- Press and hold the lateral button for more than 2 seconds.
- After 2 seconds the blue LED will briefly flash three times:
  the blue LED flashes every second,
  the green LEDs show the set time.
- Each short press & release of the lateral button on the receiver will increment the heating duration according to the built-in Time-Code (see below).
- The heating duration can also be changed by pressing the button that has been previously programmed.
- After 30 seconds following the last press & release, the programming will end and the chosen Time-Code set is saved.

Time-Code

Can be set from minimum 30 minutes to maximum 12 hours.
7 settings to choose from: 0.5, 1, 2, 3, 4, 8, 12 hours.

9 6.0 Operation

Standby operation:	heating off blue LED lit
ON	press the ON button heat output is set up on "power 3" (full power") press the ON button again Remote to “Power 0” (OFF)
Heat output settings	press the OFF button remote to “Power 2” 2 green LEDs turn on press in OFF button again remote to “Power 1” 1 green LED turns on press in OFF button again remote to “Power 0” (OFF) All 3 green LEDs turn on Standby operation, heating off – blue LED lit
Party mode	The “Party Mode” has a preset heating duration of 4 hours running on maximum heat supply, regardless of the Time-Code set (see section “Setting of maximum heating duration” above).
To launch the “Party Mode”:	Press and hold the ON button for more than 6 seconds. The heater is set on maximum heat and will switch off automatically after 4 hours. The green and blue LEDs are lit.
General OFF	Press and hold the OFF button for more than 6 seconds. The heater turns off regardless of the current heating setting. The blue LED displays the standby mode.
Test operation without transmitter	(to check the functionality of the receiver module without using the transmitter) Press the lateral button on the receiver for more than 10 seconds -> the heater turns on, 2 LEDs are lit, 80% power. Press the programing buttons again for for more than 10 seconds, the heater turns off. If not, the device is automatically turned off after 2 hours. The blue standby LED turns on.

The connecting element serves as a stylish cable connection for your Heatstrip, hiding the power cable at the backside of the device - instead of it being visible at the front side. Install the connecting element after point 4.0 in this user manual.

It is not possible to further program or set this element.

8.0 Technical data

RoHS compliant

WEEE-Reg.-Nr. DE 45650441

Operating voltage	230 V / 50 Hz
Wattages	maximum 3200 W
Heat output	3 setting
Warming up time	approx. 10 to 15 minutes, depending on the weather (temperature outside, wind)
Measurements	circa 170 x 90 x 65mm
Power cable	EUR or IK plugs
Cable length	1.5m, 3 x 1.5mm sq
Compatability	up to max. 28 transmitters
Transmission range	approx. up to 100m free
Transmitter	868,3 MHz frequency
Performance	maximum 10 mW
Transmission duration	approx. 25ms
Security	32 Bit encryption with up to 3 telegrams
Humidity	maximum 85%
Temperature range	from 0ºC to +40ºC
Storage temperature	from -30ºC to +65ºC
Shutdown	as a built-in factory setting, the receiver automatically shuts down after 12 hours of continuous use

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